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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,786	01/11/2002	Peter D. Geiger	5143-03000	9379

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EXAMINER	
WILLIAMS, HOWARD L	
ART UNIT	PAPER NUMBER
2819	

DATE MAILED: 04/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/044,786	Applicant(s) Geiger et al.	
	Examiner Howard L. Williams	Art Unit 2819	

-- Th MAILING DATE of this communication app ars on th cov r sh t with the correspondence addr ss --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-119* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 10-25, 27-38, 40-43, 45-48, 50-61, 63-119* is/are rejected.

7)☒ Claim(s) *9, 26, 39, 44, 49 and 62* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Claims 1-119 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendment filed 31 March 2003 seeks to add the phrase "operates independently" to each of the independent claims. No support in the specification as originally filed could be found for this amendment.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> *A person shall be entitled to a patent unless –*
> *(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

Claims 1-4, 10-14, 17-21, 28-34, 45, 46, 50-58, 61, 65-68, 76-78, 81, 85 and 100-102 are rejected under 35 U.S.C. 102(b) as anticipated by Franaszek et al. (US 5,729,228) or MacLean Jr. et al. (US 5,109,226). Franaszek et al. discloses a parallel compression/decompression system which uses a plurality of compressors-decompressors operating in parallel concurrently upon different

segments of the data stream of uncompressed/compressed data distributed to the respective processor to speed operation of the overall compression or decompression. The Franaszek compressor-decompressor system applies a Lempel-Ziv algorithm. MacLean Jr. et al. discloses a parallel compression-decompression system which uses a plurality of compressors-decompressors operating in parallel concurrently upon different segments of the data stream of uncompressed-compressed data distributed to the respective processors to speed operation of the device. The MacLean Jr. et al compressor-decompressor system applies an arithmetic/entropy/statistical algorithm.

Claims 1-5, 10-15, 17-22, 28-34, 45, 46, 50-59, 61, 65-69, 76-79, 81, 85 and 100-202 are rejected under 35 U.S.C. 102(e) as anticipated by Freking et al. (US 6,304,197 B1). Freking et al discloses a parallel compression-decompression system which uses a plurality of compressors-decompressors operation in parallel concurrently upon different segments of the data stream of uncompressed-compressed data distributed to the respective processor to speed operation of the device. The Freking et al. compressor-decompressor system applies a Huffman/variable-length/statistical algorithm.

Claims 6-8, 16, 23-25, 27, 47, 48, 60, 63, 64, 70-75, 80, 82-84 and 103-112 are rejected under 35 U.S.C. 102(b) as anticipated by Franaszek et al. (US 5,729,228). The indicated claims are separated to Franaszek et al. alone because the recite terminology that appears most closely associated with Lempel-Ziv type compression which Franaszek et al. uses.

Claims 5, 15, 22, 59, 69 and 79 are rejected under 35 U.S.C. 102(b) as anticipated by MacLean Jr. et al (US 5,109,226). The indicated claims in as much as they differ from the two reference rejection above are here because they include recitations drawn to statistical coding to which Huffman, VLC and arithmetic coder are often classified.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 35-38, 40-43 and 86-99 are rejected under 35 U.S.C. 103(a) as unpatentable over Franaszek et al (US 5,729,228) in view of Cheng et al. (US 5,608,396). Franaszek does not disclose the compressor-decompressor directly associated with memory devices as a meory controller/module. Cheng et al. illustrates the thoroughly obvious applications of interfacing a compressor-decompressor with memory to reduce the amount of storage space required and transmission/reception to reduce the time required. It would have been obviouse to utilize the Franaszek compressor-decompressor in these type of applications to provide these well known and documented benefits of data compression.

Claims 113-119 are rejected under 35 U.S.C. 103(a) as unpatentable over Franaszek et al (US 5,729,228). Franaszek discloses an escape code decoder and associated register which is stated as having copy the byte to the output (col. 5, line 58+). In as musch as flagging and passing raw input code (uncompressed) is extremely well known, it would have been equally, if not more, obvious to detect a flag marking such a range of data in an otherwise compressed stream and passing the flagged data section to the output because it also would have been obvious to one of skill in the art that there would be no need to attempt to decompress data that was not compressed.

Claims 9, 26, 39, 44, 49, an 62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments filed 31 March 2003 have been fully considered but they are not persuasive. First, the assertion of distinctness based upon the added language of independent operation falls short due to the lack of support in the original description. Second, the argument of independent operation for the

claimed invention as opposed to the asserted dependent operation of the compressors disclosed in Franaszek and MacLean falls short because the compressors of the Franaszek and MacLean engines are dependent only in the sense that a data stream is divided among plural compressors to speed operation and then reassembled in compressed form; precisely what is proposed by the claimed invention. In other words, if the compression engines of Franaszek and MacLean are "dependent" then so are the engines of the claimed invention. The snippets of the MacLean disclosure cited relate to how the stream is divided upon the plurality of compressors and that dividing the stream among plural compressors means that any one single compressor does not see the entire stream. As for dependence of timing among the compressor engines MacLean prefers to have the segments complete in the sequential order in which the segments were received to avoid the necessity of including processes to managed an interleaved stream. Franaszek shows in figure 2 a shared dictionary but in figure shows a plurality of dictionary one associated with each compressor. Regarding the arguments addressed to the Freking patent, the examiner notes that the citations to column 1 and column 4 portions of Freking relate to discussion of what Freking considered as background art or specific other patents. The citations of column 5 don't support the argument advanced in the response. Freking discloses variable length encoders operating in parallel. Each encoder receives a source symbol from the input in time multiplexed fashion and processes that word to produce a codeword (col. 8, lines 20-63).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Howard L. Williams at telephone number 703-308-1679.

24 April 2003

Howard L. Williams
Primary Examiner
Art Unit 2819